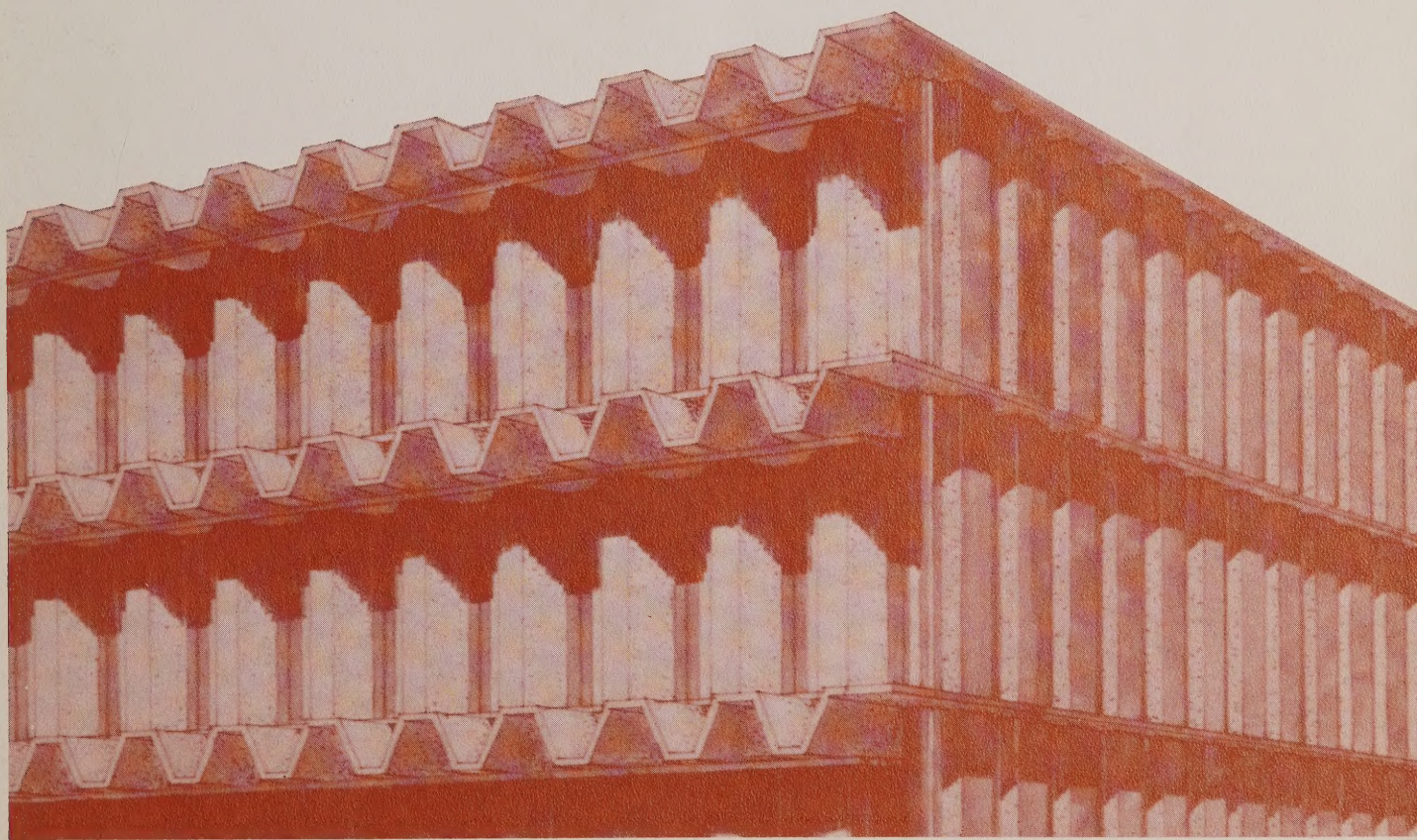
Northeast Shellspan, Inc. 10 3p PRECAST CONCRETE

NORTHEAST SHELLSPAN

A LICENSEE OF SHELLSPAN INTERNATIONAL, INC.

A Unique System of Architectural and Structural Precast Concrete



MEMBER ARCHITECTURAL STRUCTURAL PCI PRESTRESSED CONCRETE INSTITUTE.

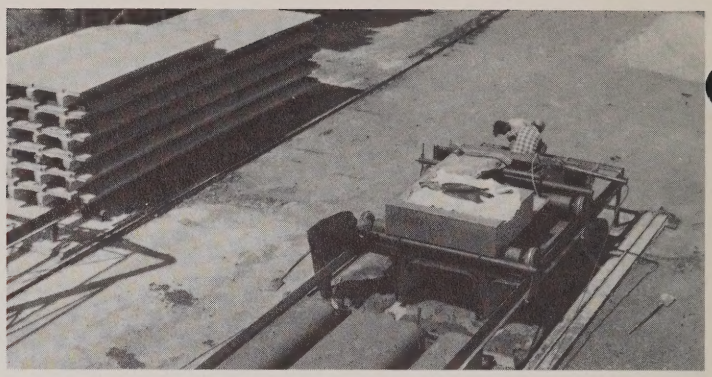
The exciting SHELLSPAN SYSTEM:

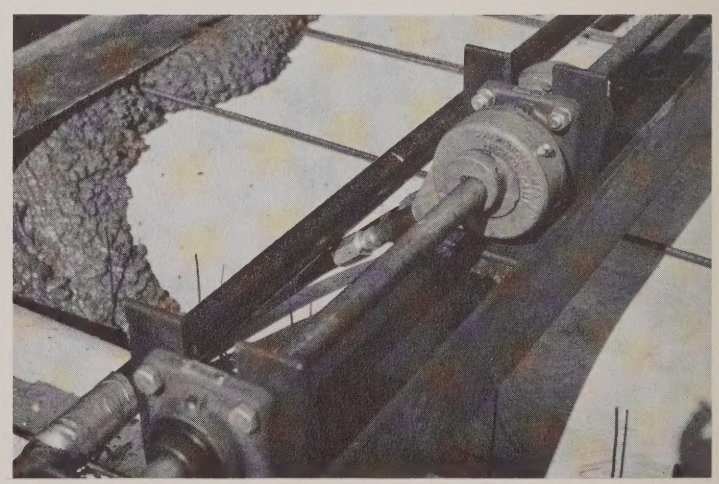
The Shellspan System is a unique method of producing and assembling precast concrete shapes for wall, floor and roof systems that are uniform in texture and finish, dimensionally accurate, and economical. The Shellspan "extruder" can create a variety of architectural and structural shapes, utilizing the minimum of required casting space, either in a permanent precasting plant installation, or a temporary set-up on or near the project site.

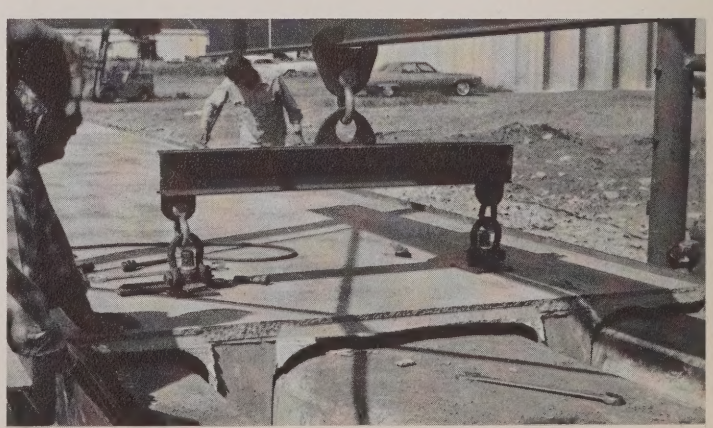
Developed in California, the Shellspan System is now being utilized throughout the United States for the manufacture of precast concrete components. Northeast Shellspan, Inc., a Shellspan licensee, with a plant at Saxton Falls, New Jersey, is strategically located to serve the ever growing New York City metropolitan area.

The Shellspan System produces two types of units—self-forming shell sections, whereby the cast unit serves as the form for the next unit, and stemmed sections, where the extruder finishes the unformed surface of the members. Column and beam sections are cast in a conventional manner, thereby creating a complete package of components for an entirely precast concrete framed building. All sections may be prestressed, conventionally reinforced, or a combination of these two used to provide the necessary structural and erection reinforcing.

On your next project, consider all the advantages accrued by specifying Northeast Shellspan products for your building. You will be glad you did.

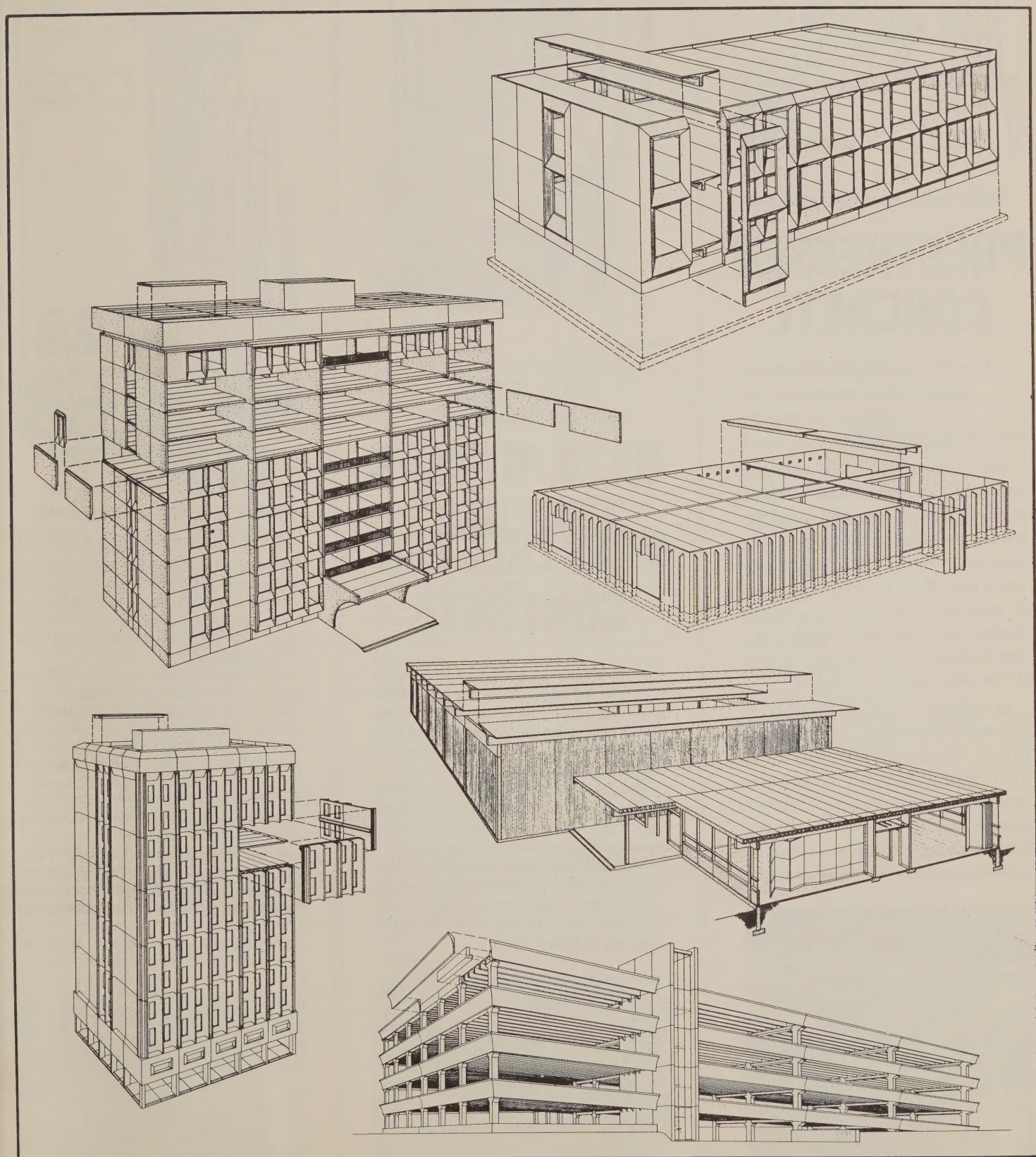






NORTHEAST SHELLSPAN

5 sound money-reasons to build with prestressed concrete



Build with mass-produced

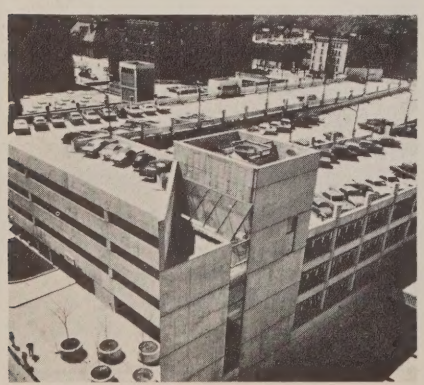
PRESTRESSED CONCRETE

for the quickest move you'll ever make!

Mass production is the key.

Prefabricated structural elements are mass produced in the plant to required design. As they are delivered to the site on schedule, trained erection crews fit them quickly and easily into place directly from truck to structure. Construction time is slashed and you get in quick. Your new building begins earning its way. *When* you planned it would!

In addition to early occupancy, you enjoy maximum use of interior space. The long-span muscle of prestressed concrete eliminates space-wasting columns. Over-all beauty, maintenance economy, and low insurance rates are benefits you'll appreciate for years to come.



Why play peek-a-boo in a forest of columns?

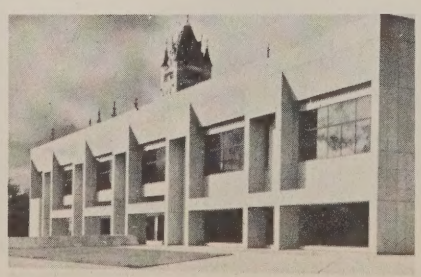
BUILD WITH

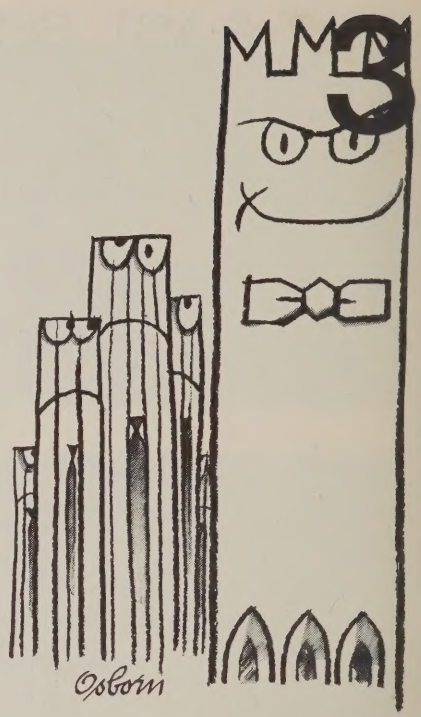
PRESTRESSED CONCRETE

The long-span muscle of prestressed concrete invites you to forget about space-wasting columns—lets you bring the wide open spaces *inside!* Remember, floor space is meaningless unless you can use it.

But space is only part of the story. Fast, economical construction and minimum maintenance give you both initial and long-term economies.

Whether your growth program calls for new construction or enlargement of existing facilities, it will pay you to investigate exciting and versatile prestressed concrete.





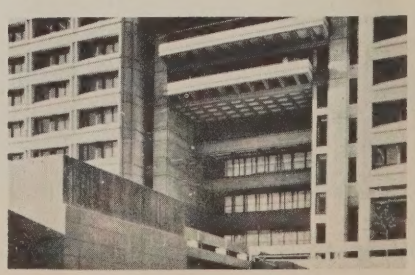
PRESTRESSED CONCRETE

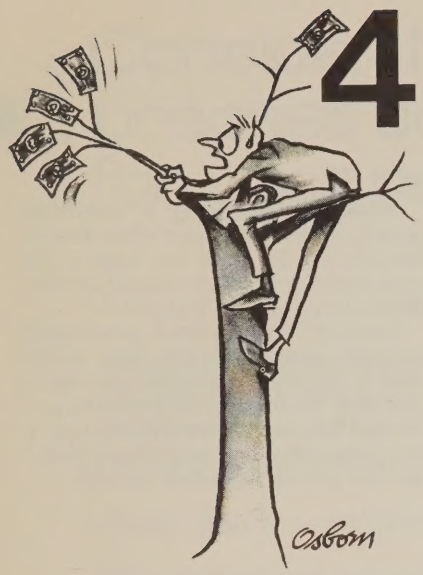
gives you the custom look instead of a carbon copy!

Ever notice how so many buildings have that monotonous, cut-from-one-pattern look? You'd almost think the blueprints were being passed around. Not so, when you build with prestressed and precast concrete.

Your building can be as individually yours as your fingerprint. Precast concrete exterior panels can be designed and produced with a virtually limitless variety of finishes, including colored aggregates, in rough or smooth-surface textures. Lending itself willingly to creative ingenuity, this versatile material cooperates in the architect's quest for the distinctively different facade.

Not only does your building's face project a unique personality but the structure functions perfectly for your particular purposes. A case in point: the longer spans of prestressed concrete provide large, column-free bays for maximum usable floor space.





If tight money has you up a tree,

PRESTRESSED CONCRETE

gives you more of what you borrow for!

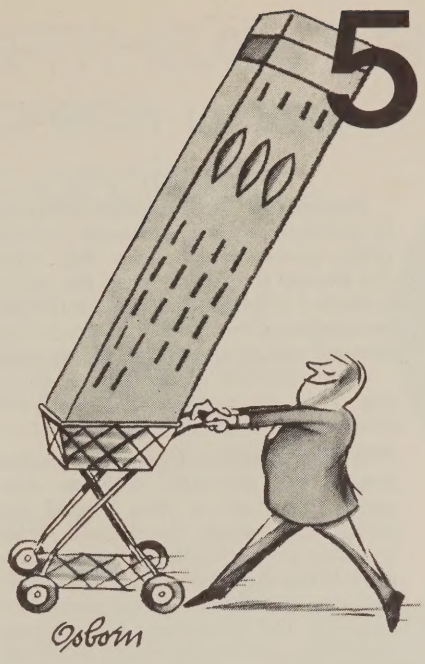
With building funds so difficult and expensive to come by, now is the time to make every construction dollar work extra hard. Prestressed concrete will help you do just that.

How? Let's start with quick construction. While the site and foundation work is under way, precast prestressed concrete structural elements are mass-produced in the plant. Scheduled deliveries and rapid truck-to-structure erection squeeze the waste out of construction time and today's high on-site labor costs.

You'll move in on time and your new building will start producing revenue on time. And *that's* what you borrow for!

But that's not all. Prestressed concrete's long-spans provide large, column-free areas. You'll have minimum maintenance, excellent fire resistance and low insurance premiums.

In brief, you'll have a beautiful, permanent, quality building erected in the shortest possible time.



Get more for your building money with mass-produced

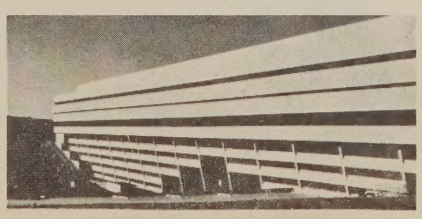
PRESTRESSED CONCRETE

You telescope construction time with prestressed concrete. And trite but all too true, time *is* money. Mass produced in the plant while site preparation and foundation work proceed, precast elements move in on schedule for fast erection directly from the truck on which they are transported. No lost motion. No wasted time. More for your building money, yes, and in still other ways.

With prestressed concrete long-spans, you eliminate interior columns which cheat you of space you pay for but cannot use.

Your upkeep is cut to the bone because little or no maintenance of this clean, smooth finished material is required. Prestressed concrete is fire resistive, so you don't drain the company treasury when insurance premiums are due.

Start looking through the construction telescope, from the right end!



industrial plants
warehouses
shopping centers
food processing plants
motels
apartments
office buildings
parking structures
airports
schools
churches
stadiums
auditoriums
marine structures
...virtually *every* type of structure.

"All right, just what *is* prestressed concrete?"

Prestressing places engineered stresses in architectural and structural concrete units—stresses which more than offset the stresses that occur when the unit is subjected to loads. This is accomplished by combining two quality materials: *high strength concrete* and *high tensile steel.*

There are two methods of prestressing. They are *pretensioning* and *post-tensioning.*

PRETENSIONING. High tensile steel strands are stretched between abutments. Concrete is then placed into forms which encase the strands. As the concrete sets, it bonds to the tensioned steel. When the concrete reaches a specified strength the tensioned strands are released. This *prestresses* the concrete, putting it under compression and creating a built-in resistance to loads which produce tensile stresses. Pretensioned prestressed concrete is manufactured in the plant, resulting in completely finished, prefabricated members ready for delivery to the job site.

POST-TENSIONING. High tensile steel strand, wires or bars are encased in tubing or wrapped, positioned in the forms, and then concrete is placed. After the concrete sets and reaches a specified strength, the high tensile steel is then stretched and anchored at the ends of the unit. Effect? Same as pretensioning.

While post-tensioning is sometimes done in a plant, it is most often done at the job site for units too large to be transported or for other unusual applications.

Basically, *pretensioned* prestressed concrete means that the high tensile steel is tensioned *before* the concrete is placed in the forms; *post-tensioned* prestressed concrete means that the steel is tensioned *after* the concrete is placed and has gained a specified strength.

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Old Waterloo—Hackettstown Road
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ARCHITECTURAL
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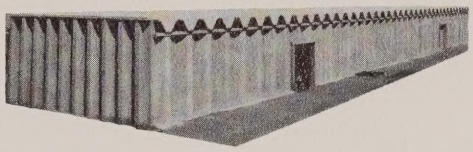
Consider NORTHEAST SHELLSPAN precast concrete units for your next project...

Attractive appearance—flexibility in design

A wide variety of aesthetically pleasing shapes and bold designs lend themselves to endless architectural treatments in the finest of modern structures. A wide variety of finishes are available—in color and in texture.

Clear spans—minimum depths

With usable space at a premium in today's structures, column free areas are a necessity. Precast, prestressed units economically provide this. Shallower structural depths are obtained, giving greater freedom of utilization of floor-to-ceiling areas, and thus reducing building volume.



Maintenance free

Permanent and complete resistance to rot, rust, corrosion, water, termites, and weather are "built-in" precast concrete. There are no day-to-day or year-to-year maintenance worries or expenses.

Quality controlled

With manufacture carefully controlled, dimensional and appearance variations are minimized. All the economies usually associated with prefabrication and mass production are multiplied in Shellspan precast, prestressed concrete structures.

Fire resistant

Concrete won't burn! Low insurance rates for precast concrete structures have been established. Extensive tests and actual fire experience have proven the excellence of concrete in resisting fire. In addition, most building codes permit greater enclosed area allowances when fire resistive structures are provided.

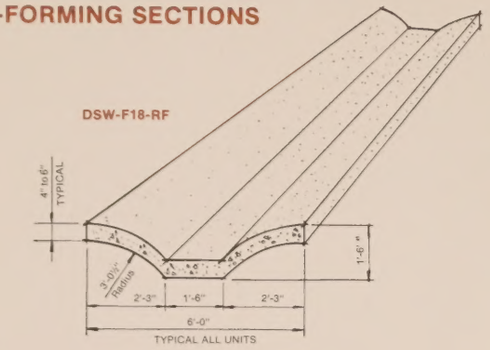
Lower cost

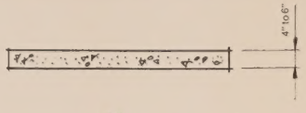
Construction speed saves money and permits earlier occupancy, which means greater return on investment. Adverse weather has little or no effect on manufacturing and erection of Shellspan members. This, combined with the savings on insurance and maintenance, make the use of precast, prestressed concrete the most desirable building system. Northeast Shellspan, is this system!

NORTHEAST SHELLSPAN

A broad product line to choose from...

SELF-FORMING SECTIONS



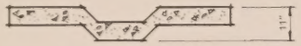


F-6

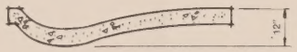
DSW-F18

DW-R18

DW-R18-RF



DALLAS-303-S

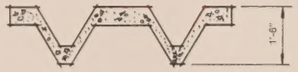


FACIA-S

DSW-F36

DSW-F18-45°

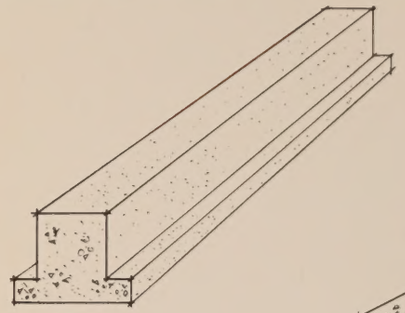
CC-S



DSW-F18-2

Spans up to 120 feet. For further information on these standard, or other available shapes, consult your NORTHEAST SHELLSPAN representative.

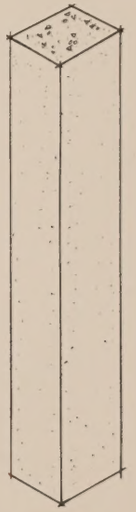
COLUMNS AND BEAMS



DOUBLE LEDGER BEAM

SINGLE LEDGER BEAM

RECTANGULAR BEAMS

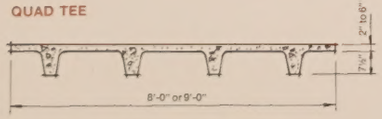


COLUMNS

Size limited only by structural and transportation requirements. Consult your NORTHEAST SHELLSPAN representative.

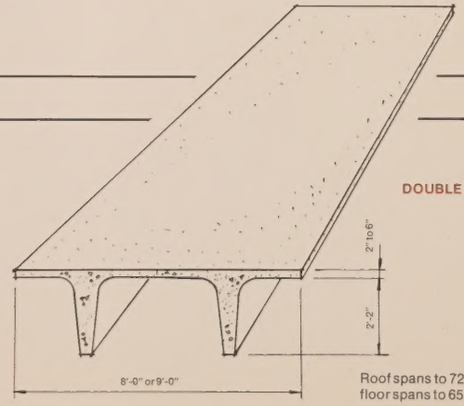
FLOOR AND ROOF SECTIONS

QUAD TEE



Spans to 35 feet for floor and roof sections

DOUBLE TEE



Roof spans to 72 feet; floor spans to 65 feet.

NORTHEAST SHELLSPAN

SHORT FORM SPECIFICATION

DIVISION 3—CONCRETE
PRECAST CONCRETE

Scope of Work
Furnish and install all precast concrete units as shown on the drawings, as manufactured by Northeast Shellspan, Inc.,

Materials
1. The following shall be in conformance with current ASTM specifications:

Prestressing Strand	A416
Cement	C150
Reinforcing Steel	A615
Welded Wire Fabric	A185
Structural Steel Inserts & Shapes	A36
Normal Weight Aggregate	C33
Lightweight Aggregate	C330

2. Suitable admixtures may be used to increase workability and durability of the concrete provided that they contain no calcium chloride.
3. Design and proportioning of the concrete mix shall be the responsibility of the Manufacturer.

Shop Drawings
Complete shop drawings showing details and dimensions shall be prepared by the Manufacturer and submitted through the General Contractor to the Architect/Engineer for review.

Design
All precast concrete units shall be designed to support the dead and live loads indicated on the drawings for indicated span conditions. Design shall be in accordance with the latest edition of ACI 318, and the Prestressed Concrete Institute.

Fabrication
1. Manufacturing and testing procedures shall be in general compliance with Division I, Division II, Section 1 of Division IV, and Division V of PCI MNL-116, Manual for Quality Control for Plants and Production of Precast Prestressed Concrete Products.
2. Dimensional tolerances shall be as outlined in Division V, Section 5 of PCI MNL-116.
3. Formed finishes to concrete surfaces shall be as outlined in Division II, Section 5 of PCI MNL-116, Standard Finish, unless otherwise noted on the drawings. Unformed surfaces shall be finished as shown on the drawings.
4. Openings 12" or less shall be cut in the field by the Trade involved. The Manufacturer will furnish only those openings detailed on the shop drawings, as approved by the General Contractor and the Architect/Engineer.

Handling and Erection
1. Precast units shall be lifted and/or supported only at points designed to resist such forces.
2. The General Contractor shall be responsible for providing suitable and adequate access to the erection area, and for establishing true line and grade.
3. Placing, aligning and leveling the members in the final position shall be by experienced workmen under the supervision of a qualified superintendent.
4. Grouting of column base plates and joints between precast units, and field welding of members to each other, or to supporting structural members, as shown on the drawings, shall be by the precast erector.

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